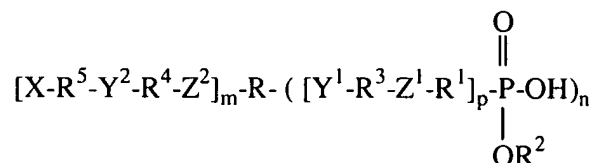


Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1, 6, 7, 8 and 33 and add new claims 44 – 46.

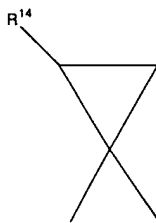
1. (Currently Amended) A liquid composition comprising a non-polymeric acid having protein and calcium-precipitating properties, an organic polymer which has carboxyl and/or hydroxyl groups, a film forming component, and a solvent, said composition having a pH value in the range of from 2 to 3;

wherein the acid is a phosphonic having the formula



in which

- n is 1, ~~2~~, 3 or 4,
- m is 0, 1 or 2,
- p is 0 or 1,
- R is a straight-chained or branched aliphatic hydrocarbon radical with 1 to 12 carbon atoms or an aromatic hydrocarbon radical with 6 to 12 carbon atoms or an aliphatic/aromatic hydrocarbon radical with 7 to 16 carbon atoms, which can be substituted by OH, NH₂ and/or COOR⁶,
- R¹ is a C₁ to C₁₂ alkylene, C₄ to C₁₂ cycloalkylene, C₆ to C₁₂ arylene or C₇ to C₁₆ alkylenearylene radical, which can be substituted by OH, NH₂ and/or COOR⁶, or is absent,
- R² is H, a C₁ to C₆ alkyl or a phenyl radical,
- R³, R⁴ each mean, independently of each other, a C₁ to C₁₂ alkylene, C₆ to C₁₂ arylene or C₇ to C₁₆ alkylenearylene radical, which can be substituted by methyl, phenyl or fluorine, or are absent,
- R⁵ is -CH=CR¹³-, a prop-1-ene-1, 3-diyl, C₁ to C₆ alkenylene, C₃ to C₉ cycloalkylene, C₁ to C₆ alkylene or phenylene radical or a group of formula



- R^6 is H, a C_1 to C_6 alkyl or a phenyl radical,
 Z^1, Z^2 each mean, independently of each other, CO-O, CO-NR⁷, O-CO-NH, O, NH, S or are absent,
 Y^1, Y^2 each mean, independently of each other, O, CO-O, CO-NR⁸, O-CO-NH or are absent,
 R^7, R^8 each mean, independently of each other, H, or a C_1 to C_6 alkyl radical,
 X is H, CN, N(R⁹)₂, OR¹⁰, COOR¹¹ or CONR₂¹²,
 $R^9, R^{10}, R^{11}, R^{12}$ each mean, independently of each other, H, a C_1 to C_{10} alkyl or a phenyl radical,
 R^{13} is H or a methyl radical,
 R^{14} is H or a C_1 to C_{10} alkyl, vinyl or phenyl radical.

2. (Previously Presented) Composition according to claim 1, wherein the phosphonic acid has a solubility of 0.5 to 20 wt.-% in water or in a mixture of 50 wt.-% water and 50 wt.-% ethanol.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Withdrawn-Currently Amended) Composition according to claim 1, wherein

n is 1 ~~or 2~~ and/or

m is 1 and/or

p is 0 and/or

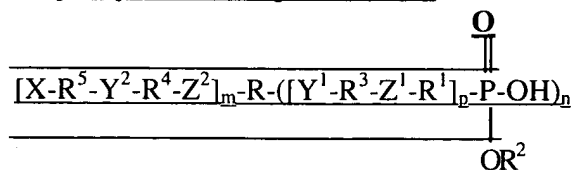
R is an aliphatic straight-chained or branched mono- to pentavalent alkane radical with 1 to 7 carbon atoms, an aromatic hydrocarbon radical with 6 carbon atoms or an aliphatic/aromatic hydrocarbon radical with 8 carbon atoms and/or

R^1 is a methylene or ethylene radical or is absent and/or

- R^2 is H, a methyl or ethyl radical and/or
- R^3, R^4 each mean, independently of each other, a methylene, ethylene, trimethylene, p-phenylene, ethylidene, 1-methylene ethane-1,2-diyl radical or are absent and/or
- R^5 is a methylene, ethylene, trimethylene, ethane-1, 2-diyl, methylethylene, prop-1-ene-1, 3-diyl, or a cyclopropylidene radical monosubstituted in 2 position or is absent and/or
- R^6 is H and/or
- Z^1, Z^2 each mean, independently of each other, CO-O, O-CO-NH or O or are absent and/or
- Y^1, Y^2 each mean, independently of each other, O, CO-O or CO-NR⁸ or are absent and/or
- R^7, R^8 each mean, independently of each other, H or a methyl or ethyl radical and/or
- X is H, CN, COOR¹¹ or CONR₂¹² and/or
- $R^9, R^{10}, R^{11}, R^{12}$ each mean, independently of each other, H or a methyl, ethyl or phenyl radical and/or
- R^{13} is H or a methyl radical,
- R^{14} is H or a vinyl or phenyl radical.

7. (Withdrawn-Currently Amended) A liquid composition comprising a non-polymeric acid having protein and calcium-precipitating properties, an organic polymer which has carboxyl and/or hydroxyl groups, a film forming component, and a solvent, said composition having a pH value in the range of from 2 to 3;

wherein the acid is a phosphonic having the formula



in which

Composition according to claim 1, wherein

- n is 1,
- m is 1,
- p is 0,
- R is a C₁ to C₃ alkylene or phenylene radical,

- R^2 is H,
 R^4 is a branched or straight-chained C_1 to C_6 alkylene radical which can be substituted by 1 to 2 fluorine atoms and/or 1 phenyl radical or is absent,
 R^5 is a 1-methylene ethane-1, 2-diyl radical,
 Z^2 is absent,
 Y^2 is O or is absent,
 X is $COOR^{11}$ and
 R^{11} is H or a C_1 to C_5 alkyl or phenyl radical.

8. (Withdrawn-Currently Amended) Composition according to claim ~~144~~, wherein

- n is 2,
 m is 2,
 p is 1,
 R is a quadrivalent aliphatic, aromatic, or aliphatic-aromatic hydrocarbon radical with 2 to 12 carbon atoms,
 R^1 is absent,
 R^2 is H,
 R^3 is a C_1 to C_3 alkylene or phenylene radical or is absent,
 R^4 is a branched or straight-chained C_1 to C_6 alkylene radical which can be substituted by 1 to 2 fluorine atoms and/or 1 phenyl radical or is absent,
 R^5 is a 1-methylene ethane-1, 2-diyl radical,
 Z^1, Z^2 are absent,
 Y^1 is absent,
 Y^2 is O or is absent,
 X is $COOR^{11}$ and
 R^{11} is H or a C_1 to C_5 alkyl or phenyl radical.

9. (Cancelled)

10. (Cancelled)

11. (Previously Presented) Composition according to claim 1, containing from 1 to 4 different acids.

12. (Previously Presented) Composition according to claim 1, wherein the polymer is a polysaccharide, a polyethylene glycol, a polyacrylic acid, a polyacrylamide, a polyvinylpyrrolidone or a mixture thereof.
13. (Withdrawn) Composition according to claim 12, wherein the polymer is a mixture of polyethylene glycol dimethacrylate and polyacrylic acid.
14. (Previously Presented) Composition according to claim 1, further containing fluoride ions.
15. (Previously Presented) Composition according to claim 1, further containing a potassium ion-releasing compound.
16. (Canceled)
17. (Previously Presented) Composition according to claim 1, wherein the film-forming component is hydroxypropyl cellulose.
18. (Previously Presented) Composition according to claim 1, containing
- | | |
|------------------|--|
| 0.5 to 40 wt.-% | phosphonic acid and/or |
| 1.0 to 40 wt.-% | carboxyl and/or hydroxyl-group-containing polymer and/or |
| 0.5 to 30 wt.-% | of a film-forming component and/or |
| 0.1 to 1.0 wt.-% | fluoride ions and/or |
| 0.1 to 10 wt.-% | potassium ions and |
| 0 to 97.8 wt.-% | solvent. |
19. (Previously Presented) Composition according to claim 18, further containing from 0.1 to 1.0 wt.-% flavourings.
20. (Previously Presented) Composition according to claim 18, wherein the solvent is a mixture of ethanol and water.
21. (Withdrawn) Composition according to claim 18, containing

1 to 5 wt.-%	of at least one phosphonic acid,
3 to 7 wt.-%	polyacrylic acid,
15 to 25 wt.-%	polyethylene glycol dimethacrylate,
3 to 7 wt.-%	hydroxypropyl cellulose,
0.1 to 1.0 wt.-%	potassium fluoride,
0.05 to 0.2 wt.-%	flavouring and
53.8 to 76.9 wt.-%	ethanol/water mixture (approx. 50 wt.-%).

22. (Withdrawn) Kit containing an acid and in spatially separated form thereof an organic, carboxyl and/or hydroxyl-group-containing polymer.

23. (Withdrawn) Kit according to claim 22, wherein the acid is applied to a brush.

24. (Withdrawn) Kit according to claim 22, containing a solution of the polymer, the composition of which is measured such that, when the solution is combined with the acid of the kit, a composition containing

0.5 to 40 wt.-%	phosphonic acid and/or
1.0 to 40 wt.-%	carboxyl and/or hydroxyl-group-containing polymer and/or
0.5 to 30 wt.-%	of a film-forming component and/or
0.1 to 1.0 wt.-%	fluoride ions and/or
0.1 to 10 wt.-%	potassium ions and
0 to 97.8 wt.-%	solvent

is obtained.

25. (Withdrawn) Kit according to claim 22, wherein the acid and polymer are housed in different chambers of a double-chambered vessel.

26. (Withdrawn) A method for the precipitation of protein comprising combining the composition of claim 1 with a protein solution.

27. (Previously Presented) A method for the desensitization of teeth comprising applying the composition of claim 1 to a tooth.

28-32. (Canceled).

33. (Currently Amended) The method according to claim 27, wherein the ~~the~~ phosphonic acid has a solubility of 0.5 to 20 wt.-% in water or in a mixture of 50 wt.-% water and 50 wt.-% ethanol.

34. (Cancelled)

35. (Previously Presented) The method according to claim 27, wherein the composition contains from 1 to 4 different acids.

36. (Previously Presented) The method according to claim 27, wherein the polymer is a polysaccharide, a polyethylene glycol, a polyacrylic acid, a polyacrylamide, a polyvinylpyrrolidine or a mixture thereof.

37. (Previously Presented) The method according to claim 27, wherein the composition further contains fluoride ions.

38. (Previously Presented) The method according to claim 27, wherein the composition further contains a potassium ion-releasing compound.

39. (Previously Presented) The method according to claim 27, wherein the film-forming component is hydroxypropyl cellulose.

40. (Previously Presented) The method according to claim 27, wherein the composition contains

0.5 to 40 wt.-%	phosphonic acid and/or
1.0 to 40 wt.-%	carboxyl and/or hydroxyl-group-containing polymer and/or
0.5 to 30 wt.-%	of a film-forming component and/or

0.1 to 1.0 wt.-%	fluoride ions and/or
0.1 to 10 wt.-%	potassium ions and
0 to 97.8 wt.-%	solvent.

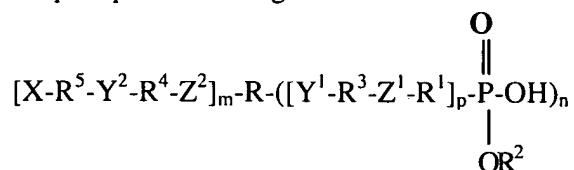
41. (Previously Presented) The method according to claim 40, wherein the composition further contains from 0.1 to 1.0 wt.-% flavourings.

42. (Previously Presented) The method according to claim 40, wherein the solvent is a mixture of ethanol and water.

43. (Previously Presented) The method according to claim 27, wherein the pH value is in the range of from 2 to 3.

44. (New) A liquid composition comprising a non-polymeric acid having protein and calcium-precipitating properties, an organic polymer which has carboxyl and/or hydroxyl groups, a film forming component, and a solvent, said composition having a pH value in the range of from 2 to 3;

wherein the acid is a phosphonic having the formula



in which

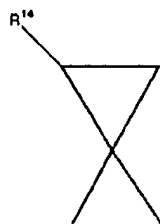
n is 1, 2, 3 or 4,

m is 1 or 2,

p is 1,

R is a straight-chained or branched aliphatic hydrocarbon radical with 1 to 12 carbon atoms or an aromatic hydrocarbon radical with 6 to 12 carbon atoms or an aliphatic/aromatic hydrocarbon radical with 7 to 16 carbon atoms, which can be substituted by OH, NH² and/or COOR⁶,

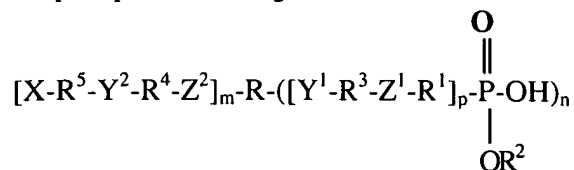
- R^1 is a C_1 to C_{12} alkylene, C_4 to C_{12} cycloalkylene, C_6 to C_{12} arylene or C_7 to C_{16} alkylenearylene radical, which can be substituted by OH, NH_2 and/or $COOR^6$, or is absent,
- R^2 is H, a C_1 to C_6 alkyl or a phenyl radical,
- R^3, R^4 each mean, independently of each other, a C_1 to C_{12} alkylene, C_6 to C_{12} arylene or C_7 to C_{16} alkylenearylene radical, which can be substituted by methyl, phenyl or fluorine, or are absent,
- R^5 is $-CH=CR^{13}-$, a prop-1-ene-1, 3-diyl, C_1 to C_6 alkenylene, or a group of formula



- R^6 is H, a C_1 to C_6 alkyl or a phenyl radical,
- Z^1, Z^2 each mean, independently of each other, CO-O, CO-NR⁷, O-CO-NH, O, NH, S or are absent,
- Y^1, Y^2 each mean, independently of each other, O, CO-O, CO-NR⁸, O-CO-NH or are absent,
- R^7, R^8 each mean, independently of each other, H, or a C_1 to C_6 alkyl radical,
- X is H, CN, $N(R^9)_2$, OR^{10} , $COOR^{11}$ or $CONR_2^{12}$,
- $R^9, R^{10}, R^{11}, R^{12}$ each mean, independently of each other, H, a C_1 to C_{10} alkyl or a phenyl radical,
- R^{13} is H or a methyl radical,
- R^{14} is a vinyl radical.

45. (New) A liquid composition comprising a non-polymeric acid having protein and calcium-precipitating properties, an organic polymer which has carboxyl and/or hydroxyl groups, a film forming component, and a solvent, said composition having a pH value in the range of from 2 to 3;

wherein the acid is a phosphonic having the formula

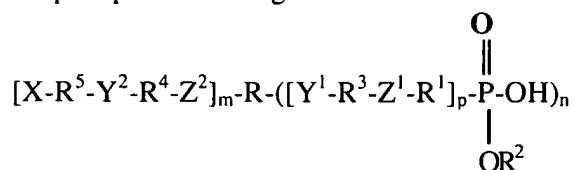


in which

- n is 1,
- m is 1,
- p is 0,
- R is a C₁ to C₃ alkylene radical,
- R² is H,
- R⁴ is absent,
- R⁵ is a 1-methylene ethane-1, 2-diyl radical,
- Z² is absent,
- Y² is O,
- X is COOR¹¹ and
- R¹¹ is H.

46. (New) A liquid composition comprising a non-polymeric acid having protein and calcium-precipitating properties, an organic polymer which has carboxyl and/or hydroxyl groups, a film forming component, and a solvent, said composition having a pH value in the range of from 2 to 3;

wherein the acid is a phosphonic having the formula



in which

- n is 1,
- m is 1,
- p is 0,
- R is a C₂ alkylene radical,

R^2 is H,
 R^4 is absent,
 R^5 is a 1-methylene ethane-1, 2-diyl radical,
 Z^2 is absent,
 Y^2 is O,
 X is $COOR^{11}$ and
 R^{11} is H.